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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HA, DAC V

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,892	Applicant(s) CHO ET AL.	
	Examiner Dac V. Ha	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 3,4,7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-2, 5-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata (US 6,470,004) in view of Norr (US 7,085,377).

Re claim 1, Murata discloses:

“a capacity managing unit for dividing the source-coded data into divided data for a plurality of channels, and generating header information corresponding to the divided data” in Fig. 3, element 41; col. 2, lines 10-17; col. 3, lines 38-58; col. 4, lines 1-10, 17-28; col. 5, lines 1-8, 15-17 in that, when the amount of data to be transmitted exceed the capacity of one channel (the assigned channel), an available data channel of other user is used in addition to the assigned channel for transmitting the data; and indication of such a situation is added in the header for assisting the receiver for correctly receiving the signal).

“a transmitting unit” (Fig. 2, elements 44, 45).

Murata differs from the claimed invention in that it does not teach “a source encoding unit for encoding data to be transmitted and generating source-coded data”; a channel encoding unit for encoding the divided data according to channel environment

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and generating channel-coded data; and multiplexing, modulating and transmitting the channel-coded data through multiple frequency bands and multiple broadcasting sites”.

However, these claimed subject matter are fundamental processing blocks of a digital communication, particularly, in the transmitter chain. Norr, in the same field of endeavor, teaches an example of “source encoding unit for encoding data to be transmitted and generating source-coded data” in Fig. 3, element 202; “a channel encoding unit for encoding the divided data according to channel environment and generating channel-coded data” in Fig. 3, element 218; and “multiplexing, modulating and transmitting the channel-coded data through multiple frequency bands and multiple broadcasting sites” in Fig. 3, element 220; col. 1, lines 7-51.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the fundamental processing blocks of the transmitter chain, taught by Norr, into Murata, depending on a specific application, and a predictable result still can be expected.

Re claim 2, Murata further discloses “wherein the capacity managing unit stores information of available capacity and unavailable capacity for each frequency band, divides the source-coded data in case that an available data capacity for transmitting the source-coded data does not exist in one channel but sum of the available data capacities of multiple channels can accommodate the source-coded data, and adds the header information in a data packet so as to reconstruct the data in the receiving apparatus” in Fig. 2; Fig. 3, element 41; col. 4, lines 19-21, 32-35; col. 3, lines 51-58.

Re claim 5, see corresponding apparatus claim 1 above. Further, Norr teaches the data to be transmitted includes "image data and audio data" in col. 2, lines 44-49.

Re claim 6, see corresponding apparatus claim 2 above.

Response to Arguments

3. Applicant's arguments filed 02/19/09 have been fully considered but they are not persuasive.

The rejection under 35 U.S.C. § 101 is withdrawn.

In the REMARKS, pages 6, applicant has argued:

"The present invention relates to an apparatus in a digital broadcasting system for dividing data in order to transmit data through a plurality of channels from multiple broadcasting sites and transmitting data having header information so as to reconstruct the data in a receiving apparatus (specification at page 2, lines 11-15). Further, the invention discloses broadcasting system for transmitting in digital broadcast service, wherein each broadcasting site transmits from an antenna having at least two frequency bands. These frequency bands must meet the standards for the digital broadcasting system (specification page 1 line 22 to page 2, line 7). Accordingly, the present invention discloses transmitting data through a plurality of frequency bands from a plurality of broadcasting sites (i.e.; a plurality of antennas for transmitting channel encoded data) if the available data capacity of at least one frequency band of the broadcasting sites can not accommodate the necessary data capacity for that respective frequency band (specification page 6, lines 4-18). In contrast, Murata relates to a communication system that is totally different from the disclosed broadcasting system of the present invention."

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., frequency bands must meet the standards for digital broadcasting; a plurality of antennas) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read

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into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Further, it is true that Murata relates to communication system, however, a broadcasting system is also interpreted as a communication system. Particularly, in a broadcasting system, the broadcasting site broadcasts signal to be received by a receiver. The same is true for a communication system, wherein the base station broadcasts signal to be received by mobile station. Moreover, in Murata, the transmitted data is divided into plural channels (Fig. 2) and header is generated corresponding to indicate assignment of such channels (col. 3, line 51 to col. 4, line 10).

Further, on page 7 of the REMARKS, applicants has argued:

“In contrast, Murata discloses transmitting as a downlink communication (i.e.; not a broadcasting signal based on the requirements for frequency bands allocated to the digital broadcasting system. (Murata Abstract). This communication system of Murata is totally different from the disclosed broadcasting system of the present invention. That is, Murata merely discloses a channel management which is necessary for multilateral communication environments such as a mobile communication, but Murata does not teach, disclose or even suggest allocating predetermined data, e.g., packet data or a program, to a plurality of channels and generating header information to record information relating to the allocating in the broadcasting system as disclosed by presently amended claim 1 of the present invention.

Furthermore, Norr merely discloses a multi-stream broadcasting System for transmitting a plurality of streams having different rights to access from each other. However, nowhere in Norr teaches, discloses or even suggests allocating predetermined data, e.g., packet data or a program, to a plurality of channels and generating header information to record information relating to the allocating in the broadcasting system as disclosed by presently amended claim 1 of the present invention.”

As indicated above, the claimed broadcasting system is interpreted as a communication system. Also, nowhere in the claim there is any recitation of allocating

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data to a plurality of channels, etc. as underlined in the above applicant's argument.

Further, the Norr is incorporated only to support the fact that encoding (source coding and channel coding), multiplexing and modulating are fundamental steps within the transmitter chain as state in the office action dated 11/26/08.

Applicant further has argued on page 8 of the REMARKS:

"In contradistinction, the present invention transmits contents collected by a camera for a standard definition television (SDTV) in a digital broadcasting system. The collected source-coded data are divided into divided data for a plurality of channels that generates and adds header information corresponding to this divided data and records this header information of the divided data for allocating of the divided data in the plurality of channels in the digital broadcasting system for transferring this divided data through the transmitters to the receiving apparatus. Then, the receiving apparatus in the digital broadcasting system receives the divided data and reconstructs the received divided data based on the recorded generated header information of the received divided data. That is, limited frequency bandwidth of digital broadcasting service is efficiently allocated in order to meet the increased data transfer capacity rate requirements (specification at page 6, line 19 to page 8, line 6).

As a result, the present invention provides an efficient digital broadcasting service by transmitting data through a plurality of frequency bands from multiple broadcasting sites that overcomes limitations of the maximum data transfer rate in the conventional digital broadcasting system because a broadcasting station has a certain frequency band to transmit different services based on the digital broadcasting standards (specification at page 9, lines 18-23). Accordingly, nowhere in Murata and/or Norr, alone or in combination, teaches, discloses or even suggests presently amended claim 1 of the present invention above."

Again, none of these features are claimed or recited in the claims.

For claims 2, 5, 6, applicants has relied on the argument made in respect to claim 1, therefore, the examiner also would like to refer to the response in regarding to claim 1 above.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 4/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dac V. Ha/
Primary Examiner, Art Unit 2611